To: Hardy, Trevor D[trevor.hardy@pnnl.gov]; DeYoung, Robyn[DeYoung.Robyn@epa.gov]; Nidhi R. Santen[nrsanten@synapse-energy.com]; Pat Knight[pknight@synapse-energy.com]
From: Jeremy Fisher
Sent: Mon 4/27/2015 6:17:13 PM
Subject: RE: AVERT Load Times

Hey Trevor,

Thanks for your emails. I was hoping that we'd be able to get back to you a little faster, but we've had some inevitable distractions from improving AVERT recently. AVERT, in its current form, uses raw CEMS data as provided –which is in local time. Inevitably, there will be AVERT regions that cross time zones (probably most of them); I don't think any cover more than two. So theoretically, there are opportunities to have time-zone mismatches within a single AVERT region. We'd like to try a run set where we adjust the time zones to a universal time zone and see how results match up, and we haven't had the opportunity to do so yet. I hypothesize that it's going to be a fairly small impact, but we should absolutely test it. So with that in mind, we're planning on testing it shortly and will keep you appraised.

Thanks for your thoughts, and we'll keep you updated. Hopefully sooner rather than later.

Cheers,

-Jeremy

Jeremy Fisher, PhD

Principal Consultant

Synapse Energy Economics

485 Massachusetts Ave., Suite 2

Cambridge, MA 02139

617.453.7045 (Direct)

617.661.3248 (Synapse Main)

617.661.0599 (Fax)

From: Hardy, Trevor D [mailto:trevor.hardy@pnnl.gov]
Sent: Monday, April 27, 2015 1:11 PM

To: DeYoung, Robyn; Nidhi R. Santen; Pat Knight; Jeremy Fisher
Subject: Re: AVERT Load Times

Robyn and company,

I hadn't heard anything regarding my questions from a few weeks ago and was wondering if you had any news/results to share.

I've been thinking about the problem more generally and think that my questions about DST and timezones would show up in AVERT in a few different ways:

1 – How does DST and timezones affect the emissions tables? When the statistical analysis was done to form the tables, were the times normalized/unified so that, say, 7am in the NW region referred to 7am for west coast generators and 8am for those in the Mountain timezone?

2 – Very relatedly, if the timezone information was normalized and unified, which timezone is considered the baseline?

3 – For these AVERT regions that span timezones, what timezone is the provided load profile in? I assume this is the same timezone as defined for question 2.

Trevor Hardy

Engineer, PNNL

From: <DeYoung>, Robyn <DeYoung.Robyn@epa.gov>
Date: Tuesday, April 7, 2015 at 10:50 AM
To: Trevor Hardy <trevor.hardy@pnnl.gov>, "Nidhi R. Santen" <nrsanten@synapse-energy.com>, Pat Knight <pknight@synapse-energy.com>, Jeremy Fisher <jfisher@synapse-energy.com>
Subject: RE: AVERT Load Times

Hi Trevor,

We are looking into your question. The data that we derive from is EPA reported data from electric generating units in their local time, however we it is possible there are time zone difference within AVERT regions. We'll need to do some test runs to better understand the magnitude of this potential issue and can back to you with our determination the week of April 20th.

Thanks,

Robyn

From: Hardy, Trevor D [mailto:trevor.hardy@pnnl.gov]
Sent: Tuesday, April 07, 2015 11:16 AM
To: DeYoung, Robyn; Nidhi R. Santen; Pat Knight
Subject: AVERT Load Times

All,

Another question regarding the load values in AVERT: how is daylight savings time and time zones handled? A few regions span time zones, most regions observe daylight savings time and at least one region (SW) has some parts that do observe and some that don't. How are we to interpret the 8760 values for load?

Trevor